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THE MICROSCOPE IN PRACTICE.

Despite the excellent microscopic training which all veterinary students have received for many years past, the use of the microscope in general practice remains very limited. In the case of not a few practitioners, anthrax, mange, sheep-scab, and bovine tuberculosis almost exhaust the list of conditions the microscope is used to diagnose; and of course there are many practices in which one or more of these diseases may never be seen. Others go further; but probably comparatively few working clinicians yet use the microscope as often as it ought to be used.

This is not at all surprising. Twenty years ago, the influence of the man who never used a microscope at all was so preponderant in general practice that the surprising thing really is, not that some portion of it still remains, but that it has diminished so rapidly. Probably more than half the members now qualified have worked under such men at some period; and naturally some effects are still seen. But the number of men who never use the microscope is lessening every year, and those who do use it are learning to do so more frequently; yet it may need another generation to give the instrument its proper place in practice.

One not uncommon failing of English practitioners is to confine their microscopic examinations to cases which clinically suggest one of a comparatively few diseases. What is wanted is an extension of the field, and often a revival or improvement in general microscopical knowledge. Given these, the microscope may be much more use in practice than many men suppose.

Even in the difficult subject of bacteriology, the general practitioner might accomplish more than he often attempts. It is true that, lacking facilities for cultural and inoculation experiments, a great deal of exact bacteriological work is beyond his reach. Yet there are many every-day cases in in which the examination of smears or scrapings, if it does not yield an accurate diagnosis, might nevertheless give useful hints. The bacteriology of wounds is a good example.

Pathological histology, also, might be more studied by clinicians. If a man has learned section cutting—which it is not impossible to acquire even after College days—and possesses a comparatively cheap and simple microtome, a great deal of histological work can be done with the material found in every practice. The systematic examination of all tumours removed, for instance, would often be of real practical value. This subject often interests students, and it is strange that so few should follow it up in after days.

A SIMPLE TREATMENT AGAINST LICE.

The following treatment against lice, which is recommended for human practice by Faniel, deserves to be adopted in veterinary work. The only precaution necessary in employing it is the avoidance of fire. It simply consists in the application of a mixture of equal parts of xylol, sulphuric ether, and alcohol at 94% strength.

In uncomplicated phthiriasis it is sufficient to well wash the hairs with cotton wool soaked in this lotion. One unpleasant drawback is the sensitivness of the scrotum, which is frequently irritated by the lotion. (Presumably the last sentence refers to treatment against *Pediculus pubis* in human practice.—*Transl.*) In all cases it is advisable for the lotion to reach the skin well. The great advantage that Faniel has found in this method is that the result is rapid, and may be said to be immediate. Moreover, the body does not retain the odour of the lotion, the lotion itself rapidly evaporates, and a quarter of an hour after the washing, the hairs are all dry and clean.

The results obtained by the author in the treatment of phthiriasis led him to apply the method to other cutaneous affections. In one case of tinea tonsurans he obtained success by washing the affected part, then rubbing it with xylol-ether-alcohol lotion for ten minutes, and finally applying, without friction, an ointment containing salicylic acid and tar. The formula for the latter was 40 centigrammes of salicylic acid, 4 grammes of coal-tar, and 40 grammes of pure vaseline.—(*Revista de Higiene y Sanidad Veterinaria*).

W.R.C.

NATIONAL VETERINARY MEDICAL ASSOCIATION

EASTERN COUNTIES DIVISION.

The Eastern Counties Veterinary Medical Association held a meeting on Thursday, Sept. 11th, at Goode's Assembly Rooms at Yarmouth, when to make the gathering of a social character members were invited to bring their wives. Luncheon was first served, after which the members dealt with an agenda of business which was followed by tea. The President, Mr. John Barr (Acle) was in the chair and the following members were present:—Messrs. E. Margarson, Swaffham; T. J. Faithfull, Halstead; H. L. Roberts, Ipswich; H. Low, Norwich; J. M. Currie, Lowestoft; S. Hill, Rudham; W. Shipley, Gt. Yarmouth; C. Nesling, Framlingham; R. C. Baxter, Downham; T. Love, North Walsham; J. Thurston, Fressingfield; W. Waters, Blofield; P. R. Turner, Bury St. Edmunds; Harry P. Standley, Norwich, Hon. Sec.

Visitors:—Messrs. R. B. Palmer, Warwick; R. Cornell and R. Holmes, Ipswich; and T. Tunney, Norwich.

Letters regretting inability to attend were received from Messrs. J. J. Scott, Colchester; A. Holl, New Buckenham; J. Buckingham, Harleston; H. Buckingham, Norwich; A. Castle, Ipswich; E. Leach, Newmarket; D. Jack, Lynn; M. Bray, Docking; H. Downe, Diss; J. Hammond, Bale; W. Turtill, Wickham Market; W. L. Little, Dublin; T. G. Heatley, Woodbridge; Prof. Wooldridge, London; J. K. Gooch, Reepham.

New Members. On the proposal of the President, seconded by Mr. Currie, Lowestoft, Mr. William Shipley, Yarmouth, and Mr. P. R. Turner, Bury St. Edmunds, were elected members.

The President nominated Mr. H. L. Roberts, Ipswich, as a new member; Mr. H. P. Standley seconded, and the nomination was accepted.

Correspondence. Mr. H. P. STANDLEY (Hon. Sec.) said that at the last meeting at Ipswich it was decided to buy a new pair of tooth shears, but since then a member remembered he had the old pair and forwarded them to Norwich so that he had not ordered another set.

A letter from the Ministry of Health in reply to the Society's suggestion that there should be at least one veterinary surgeon on the Consultative Council to be set up by the Ministry of Health included the answer of Dr. Addison to a Parliamentary question in which he said, I cannot agree such appointments would be desirable in every Consultative Committee.

Mr. H. L. ROBERTS said human and veterinary work could not be absolutely divided. One never knew when the question of milk hygiene was going to crop up, even in a discussion of the health of children. The question of dirty milk as opposed to tuberculous milk was quite within the province of the veterinary surgeon, and it was important there should be a veterinary surgeon on every consultative committee. They must be there every time the doctor was, and the doctor would be there the whole time. They should again claim representation.

Mr. STANDLEY said this was an important matter. If medical men were to be allowed to inspect cowhouses and milk under the Dairy Act, veterinary surgeons would be throwing away work.

Mr. FAITHFULL said that under the Dairies Act it was laid down that a veterinary surgeon must be employed to examine cattle and milk.

Mr. ROBERTS said that if there was no veterinary surgeon on the consultative councils the work would be badly done. Whatever he advised the medical officer would follow.

Mr. FAITHFULL moved they should urge the appointment of veterinary surgeons on the consultative councils.

Mr. STANDLEY seconded, and this was carried.

Next Meeting. Mr. E. MARGARSON moved that the annual meeting be held at Norwich in February. Mr. W. Shipley seconded and this was agreed to.

FUTURE OF VETERINARY EDUCATION.

Mr. T. J. FAITHFULL, Sudbury.

The subject of veterinary education is an important one, and I am glad of an opportunity of bringing it before you. The body of my paper has already appeared in *The Veterinary Journal*, I must therefore apologise to anyone present who has read it. However, I feel no very great compunction in dishing up old fare for your consumption because, as an Irishman might say, the best part of a paper is the discussion, and I hope to-day we shall get a good one.

With reconstruction going on all round us the profession cannot afford to leave the question of veterinary education alone any longer. Though at present we have an abnormal number of students at the schools, by the time any alterations can come into effect things will again be normal.

The recent Education Act, together with other influences which have been at work for some time, is likely to profoundly alter secondary education, and the curriculum of our veterinary schools should be altered so as to fit in with the new state of things.

Before putting down what may, I hope, prove a basis for discussion, I wish to make it quite clear that I am not one of those who advocate a five years course for the veterinary diploma. I believe that our confrères in the medical profession were ill-advised when they extended the course for the normal qualification. Much work in subsidiary branches of medical practice has been lost to the profession which might have been retained if, instead of extension, they had gone in for rearrangement of studies and increased facilities for post-graduate work. Recently it has appeared in discussion on the Anæsthetics Bill that some men employ quacks to do their castration work for them, an ominous sign which may well lead to the ultimate loss of this work to the profession.

For this reason we should carefully consider the effect of extension on our work. I hold that four years at a veterinary school should bring a student (male or female) to that stage where, if he intends to go into practice, he would be able to act intelligently as an assistant while learning to apply his theoretical knowledge; or to where, in an Army School, School of Tropical Medicine, School of Veterinary Sanitary Science, etc., he could commence his specialised studies.

ELEMENTARY EDUCATION.

Many secondary schools now teach elementary chemistry, botany, and zoology. Further, the evolutionary theory has so entered into the substance of thought that all subjects are being taught in relation to it. There should, therefore, be no need for a veterinary student to study these subjects in an elementary manner at veterinary schools, or to spend part of his first year learning to think in terms of development.

I hope that it will not be long before a leaving certificate will be granted to students of a certain standard when leaving their secondary school, which certificate, if standardised by the Board of Education, should be accepted by the R.C.V.S. as evidence of a satisfactory preliminary education on the part of proposed students.

The age at which a student should be accepted for his first veterinary examination should, I think, be raised, and satisfactory evidence should be produced that the student has received instruction in English, mathematics, elementary botany and zoology, chemistry, physics, Latin and two modern languages. It may be suggested that raising the age at which a student may commence studies and requiring from him a wider preliminary education is tantamount to extending the qualification course, but this is not the case. The expense of study at a High School, Grammar School, or other secondary school in the neighbourhood of the boy's own home is not nearly so expensive as keeping him at one of the few centres where the specialised education can be obtained. Of course another year at one of the favourite public schools would probably be as expensive, but with good teaching fairly close at hand in every county there will not be the same keenness as there has been in the past to send children half way across England to some special school.

If this arrangement of preliminary studies was adopted, it might be necessary for a year or two for the R.C.V.S. to hold a preliminary examination in biology, chemistry, and physics for proposed students who had not taken one or all these subjects at their secondary school, but the candidate should be allowed to obtain the necessary instruction wherever he might wish.

The Veterinary Course.

It must not be thought, because I would relegate elementary zoology and chemistry to the secondary education period, that I would wish to see these departments abolished from our veterinary schools: far from it. I want to see both these departments more fully utilised than they have been in the past. The physics laboratory at those schools which possess one might well be done away with, making room, perhaps, for a physiological laboratory, where experiments in dietetics and other subjects could be carried on by comparative physiologists.

First Year's Study. The veterinary student arriving at his college with a good grounding in some of the subjects now taken in his first year, should take comparative anatomy as his chief subject, but I advocate the postponement of the examination to the end of the second year. This would enable the teachers to adopt a more rational method of instruction than the present system of examination allows. In the first year I would also require the student to continue his study of zoology by attending theoretical and practical courses of instruction in protozoology, helminthology, and entomology. Instruction in these subjects should pave the way for the study of medical protozoology, parasitology, and preventive medicine of the third and fourth years, and bring the student into intimate relation with his microscope, a close companionship which should be continued until the end of his professional life.

The last subject I would place in the curriculum for the first year is stable management, including the handling of animals. The subject cannot be commenced too early; further, it is an open-air subject, and gives the student a much needed relief from the laboratory and lecture hall.

Second Year. In the second year, as at present, the study of comparative anatomy should be continued. Comparative physiology and histology should, of course, also be given the important position they now hold. The third subject might, I think, be called veterinary hygiene, part I., which should include dietetics and the study of poisonous plants, nor can I over emphasise the importance of there being close co-operation between the professors of physiology and dietetics.

Third Year. Here, again, the position of pathology and bacteriology should remain as at present, but the laboratory work should be spread over a larger part of the year. The second subject might be veterinary hygiene, part II., including meat inspection, the chemistry of water and food analysis, and veterinary toxicology, the third subject being materia medica and pharmacology, which should be taught as a natural sequel to the study of physiology and dietetics.

Fourth Year. In the final year attention should, as at present, be mainly concentrated on medicine and surgery, but with better arranged teaching in the earlier years there should be little or no cramming.

The third subject should be Veterinary State Medicine, being an outline of the veterinary work of the Board of Agriculture and the Ministry of Health.

Examinations. I would advocate allowing the man who failed only in the third subject at the end of his second or third year to proceed with his normal course of study, provided, of course, that he must have passed in that subject before sitting for his third or fourth examination as the case might be.

I have suggested close co-operation between the professors of physiology and dietetics; but, as is now being realised in regard to general education, very close co-operation should exist between *all* teachers; no branch of knowledge should be taught as a separate subject, but in relation to the whole body of knowledge with which it is desired to equip and stimulate the intelligence of the student.

University Degrees.

In discussing Veterinary Education it is not possible to leave out the question of University degrees. There are, I believe, those who would be glad to see the veterinary schools completely absorbed into the Universities, and to see the R.C.V.S. become a registering body only, on the lines of the medical Council. I do not agree. It is only by the concentration of students at certain centres that comparative medicine can get the attention due to it.

It is of course all to the good that as many of our members as possible should have a University degree as well as their membership diploma, and I think the University Senates should be asked to arrange their B.Sc. curricula so that the preliminary scientific examination can be taken before the four years study for the diploma is commenced.

I am all in favour of bringing the Veterinary Colleges in ever closer touch with the Universities, and I hope in time to see a Veterinary School attached to Cambridge, if not at both Oxford and Cambridge. I feel convinced that with a more scientifically arranged curriculum a veterinary education would come to be the natural course of study for students intending to devote themselves to the life study of zoology, comparative anatomy, and comparative physiology.

From time to time there has been an agitation in favour of compulsory pupilage with private practitioners for all students before they are granted their diploma. This I think is based rather on the idea that the diploma is the end of education rather than a milestone which is kept as a useful souvenir. If students can be taught more about stable management and are given more practical work among animals during their four years, they will not make such fools of themselves before farmers as many of them do now.

Rather than advocate pupilage for a year I would dissuade students from going with practitioners during their vacations. The long vacations would be much better spent on a big dairy or mixed farm where some idea as to animals in health can be learned.

The practice of having students as assistants or, as is sometimes done, as locum tenens lowers the whole idea of the value of the professional education. It is a system prolific of quacks and unqualified assistants.

Luckily with intravenous, intra-tracheal and subcutaneous methods of treatment we are becoming less vendors of drugs than we were ten or twenty years ago, and treatment is less by rule of thumb. Students are therefore of less use to us. When the supply of qualified men becomes normal I hope that what I am sure is a pernicious practice will cease altogether. When this comes about the young man with a veterinary diploma and twenty-one years' experience of life should be glad to get quite a moderate salary for one or two years while he is learning to apply his theory.

Proposed Curriculum Tabulated.

First Year. Comparative Anatomy. Zoology: Protozoology, Entomology, Helminthology. Stable management.

Second Year. Comparative Anatomy. Comparative Physiology, Histology. Veterinary Hygiene—Part I.

Third Year. Pathology. Bacteriology. Veterinary Hygiene—Part II, Chemical Analysis, Meat Inspection. Materia Medica and Pharmacology.

Fourth Year. Medicine. Surgery. State Veterinary Medicine.

The President welcomed the paper, and said it required study and thought before he would offer any comments.

Mr. BAXTER said that rather than go to College earlier he would advocate that a youth should spend a year on a farm.

Mr. W. WATERS said in his college days he learned nothing of stable management because there was no practical country practitioner at College capable of turning out a man well in this and related subjects. That was why it was necessary for students to have a pupilage or spend some part of their time with practitioners. If they did not, they knew but little, and when they had qualified they had to make a start and learn a good bit to do with the normal health of animals. If there was a suitable man capable of teaching these subjects they might turn out reasonable students Personally, he considered compulsory pupilage a good idea.

Mr. H. Low said he considered pupilage absolutely necessary. It was his experience that numbers of fellows qualified at College knew nothing about horses or cows, or how to talk to clients. When qualified they applied for a situation, and the veterinary surgeon they went to had to pay them a salary and teach them their business. The pupil who came to a veterinary college should have some knowledge of horses, cows, and pigs first, but some fellows went who were absolutely unadapted to the profession. A veterinary surgeon to whom a student was sent for a certain time could tell his father or guardian if he was likely to make a veterinary surgeon or not. That was very important, because many boys who thought they would like to become veterinary surgeons were quite unsuited.

Mr. H. L. ROBERTS said he believed to-day they were getting boys from the public schools, and if that was so they did not need to go to the secondary schools for students. A boy from a public school had all the necessary knowledge for his preliminary examination, two modern languages and elementary physics. It would be a backward step to recruit students from the secondary schools. In his view the curriculum in the first year with comparative anatomy, zoology, botany and chemistry made students think in terms of development. It was the elemental, or the commencement of the whole of animal and vegetable life. Comparative anatomy should be taken in the second year. As a young inexperienced examiner of Class A, comparative minor anatomy—ligaments and bones, he pitied the student if he had to take the whole of it at once. A student had enough to do to make a success of it taking the minor portion by itself. To take the whole subject of comparative anatomy in one year was a task he should not be asked to undertake. Mr. Faithfull had not suggested a remedy or given a policy of reconstruction. He said the teaching should be more rational. He had had several pupils and he thought it better for a man to learn the handling of animals with a country practitioner, especially during the war, when there was no one on the farms except men of 70 or a few land girls. If they learned to put a halter on they would afterwards be living monuments to some good country practitioner through having learned what was supposed to be taught during a man's career at one of the veterinary colleges. It was desirable that during the period of their studies they should have more intimate association with the universities. A friend of his told him that at Edinburgh they had splendid passes where years ago 60 per cent. were ploughed in one particular subject, it gave the *entrée* to laboratories, etc., in regard to which universities were not handicapped as veterinary schools are, and the tuition given was so good that a man carried it with him for the rest of his life. Compulsory pupilage was most beneficial. Twenty-five years ago the late Prof. Axe advised that a veterinary student should go on a farm and the Professor had a farm. Those who had to get their living as country veterinary surgeons would acknowledge that the wrinkles they learned as students had been most beneficial, and helped them through in numerous cases in after life. Mr. Faithfull relegated poisonous plants to the third year. Why? In his third year a man had forgotten all the orders of umbellifera and therefore poisonous plants should be taught when a man is undergoing a course of lectures and practical demonstrations in Botany.

Mr. W. SHIPLEY said he presumed the idea of education as a veterinary surgeon was to obtain a diploma and when obtained the holder was supposed to be efficient. If, by the time he obtained his diploma and was cast upon the world, as Prof. Macqueen would say, upon the unsuspecting public, he has to go about the country to learn at other people's expense, that is degrading rather than promoting him, from the point of view of education. If a student was not able to acquire a little knowledge it should be included on entrance into college, so that he had some elementary knowledge of animal management. It would be better for him, as on a farm he might get only the ideas of a farmer or cowman. It was suggested that a veterinary surgeon may employ an unqualified man to do castrations, but this was rather contradictory, for no man could possibly learn to castrate colts in London. Consequently it was necessary to be pupil to a veterinary surgeon in the country to learn such practical things. The whole idea of altering the curriculum seemed to revolve round the teaching. The theoretical part of the College was quite good. It was the practical part in which everybody was wanting. He did not see how students by going on a farm could learn how to castrate horses or do any other practical veterinary work.

Mr. P. TURNER considered toxicology should come under Class II. A man could not study toxicology till he knew Materia medica. His idea about anatomy was that too much stress was laid on bones as distinct from muscles. During the first year he was crammed with bones and learned about every little hole and spot on a bone. He passed his A examination and then more or less wiped bones out of his memory altogether—it was then all muscles, nerves, and arteries. The two would be better combined with one examination for the lot.

Mr. H. P. STANDLEY said that when in Class A at college they were taught a lot of botany and went over the orders and construction of trees but learned very little about the poisonous properties of plants. In practice they got a tremendous amount of vegetable poisons which in a lot of cases they could not put their finger on at all. They went round a pasture and when they had finished their investigations knew just as much as when they started. There should be more teaching at College of this subject. Up to a point it was a good thing for pupils to go on a farm, for if the student did not know an animal in health he could not know it in disease. He would like to see their students drawn from other ranks. Very few were sons of big farmers, and he failed to understand why this should be, unless it was for monetary reasons—because no veterinary surgeon would ever die a millionaire. Men came as assistants who did not know how an animal should be in health, much less in disease, and as for performing the every-day duties of veterinary surgeons, were about as much use as sailors. The unqualified assistant did not perhaps come into veterinary education, but there had been a good deal in *The Record* about qualified men employing unqualified assistants. The time was most inopportune for the Council to tackle it. It was all very well to tell men to advertise for qualified assistants, but let them try it and see what they are up against. Last winter he wanted an assistant and advertised for three or four months, but could not get either a qualified or unqualified man and had to do all his work himself, until he obtained his present assistant. If the Bill was passed they would have to get rid of unqualified assistants, but how would

they get qualified ones? If these unqualified men were suddenly thrown out of employment, what was to become of them? They might set up in opposition to them. If a census was taken of assistants employed by veterinary surgeons 50 to 60 per cent. would be found unqualified, and this was not generally known. Compulsory pupilage should be brought in at once. Several members of that Association had been hammering at it for 20 years. In 1915 they sent a resolution to the College urging a period of pupilage prior to admission to the College. They might send another resolution urging the advisability of every man serving with a veterinary surgeon at least 12 months before taking his diploma. This was the only way to get qualified men, and until it was done they would get men into the profession who knew next to nothing about actual practice. The only way to touch this question of unqualified men was to have re-registration again of all unqualified who have been in practice for 5 or 7 years, and after that allow nobody else into the profession except through the College. But suddenly to say after next October no qualified veterinary surgeon shall employ an unqualified man was ridiculous. Again some veterinary surgeons had unqualified fathers and brothers; what would be done in these cases?

Mr. ROBERTS condemned re-registration as putting back the clock. Instead of putting back the clock 40 years let them put the clock right. He knew a castrator who wanted 2/6 for reporting parasitic mange.

Mr. PALMER said Mr. Faithfull had addressed them too much as a pedagogue and from an academic point of view. Any reconstruction should make qualified men more practical than they are at present. He had tried to get qualified assistants who knew one end of a horse from the other but could not. He had been away at the war in Egypt for the last five years, and was one of those awful people who employed an unqualified assistant—and he intended to do so. If anyone would find him a qualified man who was a good veterinary surgeon and able to do his work he would be only too pleased, but he could not find one, nor could lots of other people. He knew a man who had been paying a high figure to a qualified assistant with the result that half his work had been frightened into his opponents' hands. Mr. Faithfull recommended a four to five years course and a post graduate course. If a five years course was necessary let them have one, but they did not want a post graduate course; after a man had once qualified he could get into practice. If a man had a practice worth anything at all he could not spare three or four months to attend a course. The College curriculum and the teaching are very good, but where the educational scheme fails is in the student himself. If the average student applied himself to his work with the same zeal as the professors he would turn his teaching to much better account. Pupilage he was all in favour of, but he did not believe in a student going on farms. If brought up amongst horses and cattle so much the better. It was a poor farm one visited to see sick animals if there were not some healthy ones, and it was a very poor student who was not observant enough to notice them. More practical men must be turned out, so that if a veterinary surgeon wanted to go away for a holiday he could feel he had a man who can do his job, otherwise one went away and had no peace.

Mr. FAITHFULL, in replying on the discussion, said he held that a man who had been to a public school knew nothing about horses, cattle, or sheep, but only his father's dog or cat, and was far better on a farm for his first two vacations than out with a veterinary surgeon. Mr. Waters said compulsory pupilage was necessary because of the inadequacy of the teaching. He hoped under the new educational schemes the Government will make larger grants to veterinary schools, but how any professor remained at College on the salary given he could not understand. Everyone of them must be a philanthropist of the first water. During the war there had been several reductions of their slender salaries in order to keep the Colleges going. If they could get enough money they could have adequate teaching, and pupilage would not be so necessary. It all hinged on whether a man with a diploma is expected to be a capable veterinary surgeon It was almost too much to expect of a man who qualifies at 21. If there is to be pupilage it should be in the fourth year, before the diploma is granted, certainly not during vacations between examinations, because the tendency is for a student who goes out during vacations to feel that what he has learned at College is not at all necessary, and that he should go through College as quickly as possible, and apply the practical knowledge he has picked up with a veterinary surgeon. As to going on a farm between 16 and 17, he doubted whether many would rise to the standard of primary education before 17. He agreed with Mr. Low that a certain number of students at College are in no way fitted to be private practitioners, but it is quite another matter to say they are not fitted to be veterinary surgeons. There were public health appointments, and men wanted for the Army and Colonial services, and the qualifications for men doing research and bacteriology or going into the Army were not the same as are wanted for men going into private practice. Therefore a variety of students was better, for they must not think they were the only type wanted in the profession, and it would be more necessary in the future than it had been in the past. Mr. Roberts thought it retrograde to have men from the secondaryschools, but in Scotland quite a fair proportion of the students are elementary school boys who get scholarships for secondary schools and further grants which enable them to go to College, and he was not at all certain that type of man does not turn out as good veterinary surgeons as public school men. Certainly Scotch veterinary surgeons are most of them very capable. If you take the pick of the primary schools and then the pick of the secondary schools, and these fellows come on, you will have men of greater intelligence than if you take a man simply because he has been in a certain class, educated in a certain class of school. What they are doing in Scotland is going to be done in England, and a boy, if he has capabilities will be able to go from the bottom of the ladder right up to the highest position to which education can take him. It is quite possible Harrow and other public schools will have to take a proportion of boys from other schools and primary schools as a condition of Government support. Now, in all schools the whole idea of life is taught from the point of view of development, and a boy when he gets to College does not want to spend time in two or three classes learning to think in terms of development.

He agreed with Mr. Turner that you cannot divide anatomy into different water-tight compartments. Professors held the same view and would like to teach anatomy as one subject, and examination should not be held until the expiration of two years when the student can think of anatomy as one subject. The handling of animals cannot be learned on farms in the way they wanted. He went as pupil on a farm for four years and learned to milk and plough, and never once regretted what some people would consider a waste of time before he went to college. They might dispense with botany at college and let it be taught at school, teaching poisonous plants when near the end of education. Now, a student hurried through botany and forgot all about it. Taught botany later in his four years he would see the point of it and remember it. Mr. Shipley thought the diploma as it stands is sufficient. It is sufficient to be a veterinary surgeon but whether it is sufficient to start

in practice brought them back to the question of pupilage. If they were to have pupilage, it would be better in the fourth year, before a man had his diploma. It was a false idea that when a man left College he was a fit veterinary surgeon. When a man qualified in any other profession he only expected to be just able to earn his living while he was learning the practical part. A four years' course was ample for a man going into private practice. It would be fatal to force a man to take a five years' course at the present expenditure on education. Mr. Turner thought toxicology can be taught at the place he had put veterinary hygiene. He put it in the same year as materia medica; possibly it could be taught by the same man only at different lectures. He would not deal with unqualified assistants under his subject, but to re-register them was putting back the clock. The College made a very bad blunder in allowing men in the last 15 or 20 years to have unqualified assistants. They should not be in the position of men upon whose education £1000, and possibly nearer £2000, has been spent. It was also lowering the whole idea of the education of veterinary surgeons, for if their education was worth anything it was in bringing it to bear upon their cases. If a man after taking the first year or two was to attend cases medically, they might just as well shut up shop and have no Royal College at all. Mr. Palmer thought his paper too pedagogic, but it was intended to provoke discussion—which they had had. A diploma ought to make a man more practical, but he agreed there was not enough practical training, and that was why biological training should go over three years, for some men left College without being able even to make a smear. The case cited by Mr. Palmer of a high figure paid to a dud seemed to him exceptional. A recently qualified man should not expect to take the figure a capable man could command. Six guineas, was, he supposed, nearer the fee now paid; and a chemist could not obtain a qualified assistant under £6 10s.

Mr. STANDLEY said a lot of them had been asking £9 10s.

Mr. ROBERTS said he was asked £8 to £9 by men qualified last July.

Mr. FAITHFULL said that while there was this tremendous shortage there might be a difficulty. It would only be for 4 or 5 years till the supply became normal. He entirely disagreed with bringing the course to 4 years instead of a post-graduate course. Some men employed quacks to do their castration and it was an instance how work might be lost. Medical men lost midwifery and dentistry by lengthening their education. It would be a mistake to lengthen theirs beyond 4 years with a post-graduate course for men going into the Army, the School of Tropical Medicine, or the School of Veterinary Sanitary Science, but make other men go into practice. To put in another year only to inspect meat would be a mistake.

The PRESIDENT on behalf of the members cordially thanked Mr. Faithfull for his paper and reply.

SPECIMENS.

Mr. ROBERTS presented some specimens of worms found in lambs. He was called to investigate a heavy mortality on behalf of the Suffolk Sheep Society, ten or a dozen lambs being found dead each day. One man lost 60 in about ten days. There had not been so much of it in the Eastern Counties for the last two years, and the owners would not believe it was due to gastritis, and he sent a dead lamb to Sir John M'Fadyean who found it was a very clear case of parasitic gastritis. The worms were strongylus cervicornis. In another case strongylus contortus were found.

Mr. WATERS exhibited a fractured navicular from a four-year-old cart mare at grass, found very lame one morning. She had been lame on and off, and a month or two before had been covered. She had apparently got a sprung hock, and at one time seemed slightly lame, and at another time quite sound. When he was called to see her, from the fetlock to the hock there was every appearance of septicæmia. He opened it up for fluid pus at the coronet, but this did not do any good, and he finished up by shooting her. He found the navicular bone in four pieces. Was it possible to have a deferred fracture from the time when she was covered or did it occur sometime later? There was no sign of puncture coming up through the foot, and it had nothing to do with a pricked foot.

HARRY P. STANDLEY, Hon. Sec.

ANIMALS (ANÆSTHETICS) ACT, 1919.

9 & 10 GEO. 5. CH. 54.

An Act to make further provision for the Protection of animals from cruelty. [19th August 1919.]

Be it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by authority of the same, as follows:—

1.—(1) If any person shall subject or cause or procure, or being the owner permit to be subjected, an animal to an operation contrary to the regulations contained in this section, he shall be guilty of an offence under this Act.

(2)—(*a*) A horse, a dog, a cat or a bovine shall not be subjected to any operation specified in the first, second, or third Schedules of this Act, respectively, unless the animal during the whole of the operation is under the influence of some general anæsthetic of sufficient power to prevent the animal feeling pain.

(*b*) A horse, a dog, a cat, or a bovine shall not be subjected to any operation specified in the fourth, fifth, or sixth Schedules to this Act, respectively, unless during the whole of the operation it is under the influence of some general anæsthetic or some local anæsthetic being, in either case, of sufficient power to prevent it feeling pain.

2. Any person who is guilty of an offence under this Act shall be liable on summary conviction in respect of the first offence to a fine not exceeding five pounds, and in respect of any second or subsequent offence to a fine not exceeding twenty-five pounds, or alternatively, or in addition thereto, to be imprisoned for any term not exceeding three months.

3.—(1) The Board of Agriculture and Fisheries may, by order made subject to the provisions of this section, add any other operation to the operations specified in any schedule to this Act, and any operation so added shall be deemed to be an operation specified in that schedule, and may transfer an operation from one schedule to another, and the Board of Agriculture and Fisheries may also, by order made as aforesaid, extend any provision of this Act to any domestic animal to which it does not at the time apply, with such modifications or additions as may appear to that Board to be necessary. The Board may, by order made subject to the provisions of this section, declare any substance to be a suitable general anæsthetic or a suitable local anæsthetic for the purposes of this Act, and any substance so declared shall be deemed to be a general anæsthetic or local anæsthetic, as the case may be, of sufficient power to prevent the animal feeling pain if properly applied.

(2) The draft of any such order shall be published for a period of three months before the order is made, and the Board of Agriculture and Fisheries during that period shall receive and consider any representations

made to them with respect to the order by any persons appearing to them to be interested in the subject of the order.

(3) The order, when made, shall forthwith be laid before Parliament, and shall not take effect until it has so lain for thirty days before each House of Parliament, being days upon which that House has sat, and if a resolution is passed by either House before the expiration of such days declaring that the order be annulled, the order shall not take effect, but if no such resolution is passed the order shall take effect on such day after the expiration of the last day on which any such resolution might have been passed as the Board of Agriculture and Fisheries may appoint.

4. In this Act, except the context otherwise requires, the expression "horse" includes pony, mule, jennet, or donkey.

5. Nothing in this Act shall apply to any experiment to which the Cruelty to Animals Act, 1876, applies.

6. This Act in its application to Scotland and Ireland shall have effect with the substitution of references to the Board of Agriculture for Scotland and the Department of Agriculture and Technical Instruction for Ireland, respectively, for any reference to the Board of Agriculture and Fisheries.

7. This Act may be cited as the Animals (Anæsthetics) Act, 1919.

SCHEDULES.

First Schedule. Horses.

1. Operation for quittor. 2. Operation for stripping the wall or sole of the hoof. 3. Operation for poll evil. 4. Operation for fistulous withers. 5. Ovariotomy. 6. Laparotomy. 7. Amputations of penis, mamma, uterus. 8. Extraction of permanent molar teeth. 9. Operations for scrotal and inguinal hernia. 10. Operations for scirrhous cord and extensive tumours.

Second Schedule. Dogs and Cats.

1. Castration in animals six months old and upwards. 2. Ovariotomy. 3. Laparotomy. 4. Amputations of penis, mamma, uterus. 5. Operations for scrotal and inguinal hernia.

Third Schedule. Bovines.

1. Ovariotomy. 2. Operations for actinomycosis. 3. Laparotomy. 4. Amputation of penis, mamma, uterus. 5. Dishorning cattle over one month old.

Fourth Schedule. Horses.

1. Neurectomy or unnerving. 2. Enucleation of the eyeball. 3. Line and point firing. 4. Operation for umbilical hernia. 5. Urethrotomy. 6. Docking of the tail. 7. Trephining.

Fifth Schedule. Dogs and Cats.

1. Enucleation of the eyeball. 2. Operation for umbilical hernia. 3. Urethrotomy. 4. Docking of the tail and clipping or rounding of ears of animals over six months old.

Sixth Schedule. Bovines.

1. Enucleation of the eyeball. 2. Operation for umbilical hernia. 3. Rumenotomy. 4. Urethrotomy. 5. Trephining.

TUBERCULOSIS AND MEAT INSPECTION.

The following "Special Report *re* Tuberculous Animals" was submitted some six months back to the Public Health Committee of the County Borough of East Ham, London, E. It has been forwarded to us as being worth notice by a section of our readers.

Gentlemen,—In compliance with your instructions contained in Minute 149 of your Report dated 9th December, 1918, I beg to append for your information the following details relating to the present methods of dealing with tuberculous animals.

It has been fully established by the Royal Commission appointed to enquire into the relations of Human and Animal Tuberculosis (1911-12), that this disease is communicable from animals to human beings.

It is also accepted that some of the causes of the prevalence of the disease are (i) the crude method of meat inspection *and* (ii) the placing of diseased cattle upon the meat market.

Since the suspension of the Tuberculosis Order of 1914, there has been no statutory power making it obligatory for an owner to report the existence of the disease among his animals, although he may be fully aware that some of his herd are affected; for there are frequently unmistakable symptoms of the disease. There has also been no compensation payable to owners, who have, therefore, not been anxious to report diseased or suspicious animals. Under the provisions of the Public Health Act, medical officers and sanitary inspectors have power to seize any diseased animals exposed for sale, deposited for sale, or being prepared for human food; but it will be readily seen and appreciated that these powers, good as they may be, easily fall short of even reasonable efficiency. For no person having a diseased animal would expose it for sale, or deposit it at a place of sale in such a condition, but would prepare it for manufacturing purposes (sausages, etc.), and the only chance an inspector has is to drop in during the process, which usually takes place in the slaughter-house, and at exceptional hours.

The percentage of diseased animals that pass through the slaughter-houses is large. Tuberculosis largely exists with cows, and especially with the town cow-shed animal. The disease greatly varies. Many are only slightly affected, usually in the lungs and thorax cavity. It It is not the practice to condemn the whole carcase unless the disease be what is termed "generalised." If the disease is localised, the parts affected only are condemned. In these matters inspectors are guided by the recommendations of the Royal Commission on Tuberculosis, for in cases of "meat seizure" magistrates have the last word.

Should an enthusiastic inspector, after discovering the disease, and with the best of intentions, seize a whole carcase and a magistrate condemn it, evidence might be produced at the subsequent hearing of the case, proving that the disease was only localised, and then with the recommendations of the Royal Commission before the court, both the inspector and the local authority he represents would be placed in a serious position. The difficulty of deciding to what extent the disease must have advanced before seizure, will be appreciated. Notwithstanding all that is laid down in reports of Royal Commissions, an inspector is guided largely by his experience.

This, of course, is the inspector's difficulty with animals viewed by him at slaughtering, but great numbers of beasts are killed secretly, and an inspector never sees them. The presentable ones are sent either to market or to the retailer, but the diseased and emaciated ones are boned out and despatched for manufacturing purposes.

The retail butcher who purchases animals from the cattle dealers at a fair price sometimes finds, when he kills, that one of them reeks with disease. Some butchers will send for the inspector and have such a carcase condemned and sent to a firm of manure manufacturers, etc., but others will bone it out, destroying all traces of the disease, and cause the meat to be "made up."

Compare the financial aspect as it affects these two butchers. The man who sends for the inspector and has the carcase condemned, would receive from the manure manufacturer about £7 whilst the other man would obtain an average of at least 6d. per lb., which would realise £20. If he should be convicted, the maximum fine under the Public Health Act for first offence would be £20. It will therefore been seen that the man who acts in the public interest will undoubtedly lose money. What is the remedy?

Courses suggested are :—(1) Compulsory notification, with heavy penalties for failing to notify clinical cases of disease. (2) Subjecting milking cows periodically to the tuberculin test. (3) Provision of public abattoirs, and the abolition of private slaughter-houses. (4) Inspection and marking of all carcases before being exposed for sale. (5) Defining a standard of emaciation. (6) Adequate compensation to owners who notify existence of disease, before and after slaughter. (7) Imprisonment in place of fines for the offence of knowingly imposing diseased meat on the public.

The Tuberculosis Order of 1914 makes notification compulsory, and provides for compensation, but the amount is inadequate, and has, moreover, to be provided by the local authority. This is unfair, as a person could send animals into a district and then notify. The whole question is a national one, and should be dealt with in a national spirit. There never has been so favourable a moment as the present for this reform, as the country was never so free of shanks or screws, which are the poorest animals and for that reason the more subject to disease. Since the rationing of food, all meat, irrespective of its quality has been sold at the same price, and the owners of these outcasts have sold them at top prices. Therefore I question if there are many such animals left. Naturally, when prices are equal, farmers have retained their best for stock purposes.

During the war many slaughter-houses have not been in use owing to shortage of men and stock, and if adequate provision were made, these places could remain closed. The closing of private slaughter-houses and the erection of public abattoirs is a national obligation, and one which should find a place in the much talked of reconstruction scheme. It will cost money, but better spend money in preventing the ravages of a grim disease, than in building up a colossal system of treatment. It is better to remove a cause than to remedy an effect, but for this disease there is no remedy.

If the Council desire to express any opinion relative to the subject under consideration, I respectfully submit the following suggestions as a basis for a resolution :—

"That the time is now opportune for the Government to consider the urgent necessity of immediately making compulsorily notifiable all diseases of animals that are communicable to human beings, and of providing adequate compensation to be paid subsequent to any action that may in the public interest be determined, and, further, that in any scheme of national reconstruction, there should be provided a public abattoir for every Urban District, and that in every such district powers be granted to enable the local authority to compulsorily close the private slaughter-houses."—I am, Gentlemen,

Your obedient Servant,

(*Signed*) JOSEPH G. BANKS.

Chief Sanitary Inspector, and Inspector Con. Dis. Animals Act.

Town Hall, East Ham.

Mr. L. W. WYNN LLOYD notes that S.V. 17 is a misprint for S.V.M. in his remarks on "Coccidiosis in Ireland," p. 113, last week.—Proof reader's error.

RE ARMY BOARDED OUT HORSES.

To the Editor of The Veterinary Record.

Dear Sir,—Both my partner and I were approached at different times as to whether we would take on Army horses at the 30/- rate. We both replied that the figure was an impossible one owing to cost of travelling.

Yesterday I was called by a client who has horses under the scheme to attend one with colic. After I got there he told me that he was supposed to send for someone 14 miles away, but preferred to send for me and pay the bill himself. I attended last night and again this morning.

Supposing the appointed practitioner had been sent for, the annual fee would not have covered his motoring expenses for the two journeys!

No doubt those who arranged the scheme considered they were doing well for the practitioner, but by now they must be convinced that it needs considerable amendment.—Yours etc.,

Sudbury. T. J. FAITHFULL, M.R.C.V.S.

SECTION 100 OF THE SWANSEA CORPORATION ACT, 1902.

The Veterinary Inspector of the Corporation may exercise the powers of section 116 (power of Medical Officer of Health to inspect meat, etc.) of the Public Health Act, 1875, in the same manner as the Medical Officer or the Inspector of Nuisances and the Public Health Acts shall apply within the Borough as if such Veterinary Inspector were mentioned in the said section in addition to the Medical Officer and the Inspector of Nuisances.

Pellagra.

Many of our readers will remember the long and interesting search for the causal factor of this disease, notes of which appeared in our pages for several years past, including the enquiry by Prof. Sambon on the presence of *Simulidæ* in local water supplies, and of another Italian investigator on the effect of water in argillaceous lands. Then Dr. Sandwith opened the question of deficiency diet, and this was followed by experiments in U.S.A, and those findings appear to be finally clinched by the following experience. Indirectly, the question appeals to veterinarians in connection with the long contested question of rickets in puppies, which the recent work of Dr. and Mrs. Mellanby appears to have demonstrated to be the result of diet deficiency.

The following notes on a report published at Alexandria are taken from the current issue of *The Lancet*.

"A prevalence of pellagra having been reported among the Turkish prisoners of war interned at Kantara, in Lower Egypt, the D.M.S. Egyptian Expeditionary Force appointed a committee to investigate whether the disease in question was in reality pellagra, and, if so, whether the prisoners of war were generally infected before or after their capture; whether the disease was increasing; and, if so, was it spreading by infection from case to case or by infection due to location or local conditions; or whether it was due to some defect in diet or to other general condition. Further, the committee was to investigate the ætiology of the malady in its relation to bacteria, protozoa, blood conditions, pathology, and food.

"The conclusions may be summed up as follows :—The disease was true pellagra and the patients were generally pellagrous before capture. The great majority of the cases that were systematically questioned stated that they had similar symptoms before capture, while amongst those examined shortly after they were made prisoners many were found suffering from the fully developed disease. There was no evidence of case-to-case infection, and none pointing to location or local conditions having had anything to do with the causation or spread of the

disease. The camps at Kantara left little to be desired as regards their situation and hygienic condition. As regards diet, judged by existing standards, the food issued to both non-labour and labour prisoners provided an ample margin over the requirements of healthy men and gave a suitable balance of proximate food principles. Pellagra as a primary or immediate cause of death played an insignificant part in the series of cases that were examined. As a contributory cause its influence was shared by other debilitating diseases. of which chronic dysentery was the worst. After thorough investigation by various experts, no evidence was found as to the ætiological relationship of the disease to bacteria, protozoa, or to blood conditions. With regard to food, the committee found so constant an association between the biological protein value of diet and the occurrence of pellagra that they considered that the lack of sufficient biological value of protein stands in ætiological relationship to pellagra, certainly as an exciting factor, and possibly as the determining factor.

"The recommendations made by the committee were :—1. In view of the pellagra admission rates having remained approximately constant in non-labour camps during the last two months, and having diminished so markedly in labour camps in the present month (December), it is considered that the full authorised diets are adequate, and that it is not necessary at present to introduce any cardinal change. 2. Full variety should be given under the alternatives of the existing ration scales, and close supervision should be exercised over preparation and cooking of food, with special regard to pulses in both respects. 3. Any increase in pellagra should be met by an increase in animal protein ; the occurrence of œdema should be met by an increase in fat.

"Not a single case developed among 2000 German, Austrian, and Bulgar prisoners, whereas there were some 300 cases among the 6000 Turks in the adjoining compound. No case of pellagra occurred among the British troops. The Turkish prisoners for long periods prior to capture had been on rations considerably below the value of those they received after arrival at Kantara, and also below the standard of minimal needs, and had been subjected to great physical strain and privations.

SUBSCRIPTIONS TO R.C.V.S.

The Secretary of the Royal College of Veterinary Surgeons begs to acknowledge the receipt of the following subscriptions for 1919 :—

Bayley, A. E., Stoke Newington, 1917/8/9	£3	3	0
Cockerton, B. S., Cambridge Heath	1	1	0
Pratt, S. W., Shanghai	1	1	0
Previously acknowledged	£961	16	10
Sept. 16th, 1919.	£967	1	10

ARMY VETERINARY SERVICE

THE MOST EXCELLENT ORDER OF THE BRITISH EMPIRE.

The King has been pleased on the occasion of His Majesty's Birthday, to give orders for the following promotions in, and appointments to, the Most Excellent Order of the British Empire, in recognition of distinguished services rendered in India in connexion with the war. To be dated June 3rd, 1919 :—

C.B.E.—Military Division.

EVANS, Col. G. H., C.I.E., A.D.C., C.V.D., I.D.F.

O.B.E.—Military Division.

HAYES, Capt. (A.Maj.) F. B. ; HEWLETT, Lt. (T.Maj.) K.

Extracts from *London Gazette*

WAR OFFICE, WHITEHALL, Aug. 27.

REGULAR FORCES. ROYAL ARMY VETERINARY CORPS.

Sept. 8.

Capt. and Bt. Maj. A. S. Head, C.M.G., F.R.C.V.S., late actg. Lt.-Col., to be Lt.-Col. (April 16).

Sept. 9.

Temp. Capt. C. W. Dunkin relinquishes the actg. rank of Maj. on ceasing to command a Vet. Hosp. (Aug. 2).

The follg. temp. Capts. relinquish their comms. on completion of service :—W. B. De Vine, M.C. (April 11, and is granted the rank of Maj.). and retain the rank of Capt. :—W. D. Brand (July 16) ; G. H. Broad (July 23) ; S. J. Cotton (July 27) ; J. Forrest (Aug. 4) ; J. R. Rider (Aug. 17.) ; A. L. Wilson (Aug. 7) ; T. L. Wright (May 10).

Sept. 12.

The follg. relinquish actg. rank of Col. on ceasing to hold appt. of D.D.V.S. :—Lt.-Col. T. W. Rudd (May 6) ; Maj. J. A. B. McGowan (May 7) ; Temp. Capt. A. De R. Gordon, D.S.O., relinquishes actg. rank of Lt.-Col. on ceasing to hold the appt. of A.D.V.S. (March 14) (substituted for notifcn. in *Gazette* June 2).

The follg. Majs. relinquish actg. rank of Lt.-Col. :—O. S. Fisher, on ceasing to hold the appt. of A.D.V.S. (April 26) ; H. T. Ryan, D.S.O., F.R.C.V.S., on ceasing to commd. a Vet. Hosp. (May 6) ; J. S. Nimmo, D.S.O., (July 1) ; Capt. J. H. Wright, (T.F.), relinquishes actg. rank of Maj. on ceasing to to hold appt. of D.A.D.V.S. (March 30).

S.A.V.C.—The *Gazette* notifcn., Aug. 27, concerning Temp. Capt. R. P. Jones is cancelled. R. P. Jones (late temp. Capt.) to be temp. Capt. with Seny. April 1, 1916 (July 2, 1917) : Temp. Capt. R. P. Jones relinquishes his commn. on completion of service, and retains the rank of Capt. (July 30).

Sept. 13

Temp. Lts. to be temp. Capts. : W. B. Davidson (Aug. 29) ; A. J. Kelly (Sept. 1).

Sept. 15.

Supern. Capt. G. V. Golding is restd. to estbt. (Aug. 19) ; Capt. and Bt.-Maj. C. A. Murray relinquishes acting rank of Maj. on ceasing to hold appt. of D.A.D.V.S. (July 24).

Sept. 16.

Temp. Lts. to be temp. Capts. :—B. T. Carmichael (July 24) ; J. McAllen (July 30) ; T. J. Hurley, D. P. White, I. Robson (Aug. 7) ; J. T. Alcock (Aug. 8) ; J. K. Irvine (Aug. 12) ; R. B. Catt (Aug. 16) ; T. Kelleher Aug. 19).

CAN. A.V.C.—Temp. Capt. J. R. J. Duhault, O.B.E., to be temp. Maj. (May 1).

TERRITORIAL FORCE, ROYAL ARMY VETERINARY CORPS.

Sept. 8.

The notification regarding Maj. (actg. Lt.-Col.) E. W. Parks, O.B.E., T.D., which appeared in the *Gazette* of May 3, is cancelled.

OBITUARY.

PETER G. BOND, M.R.C.V.S., Plymouth.
Graduated Lond : March, 1886.
Died Sept. 2, 1919, Age 67.

W. HARVEY BLOYE, Ebrington St. Plymouth.
Lond : March, 1883. Fellow July, 1891.
Mr. Bloye's death occurred on August 14.

W. G. SCHOFIELD, M.R.C.V.S., Pontefract.
Edin : April 15, 1869.
Died Sept. 11th, 1919, Age 70.

JOHN RIDDOCH, M.R.C.V.S., Edinburgh.

Edin : July, 1884.

Mr. Riddoch died in Edinburgh on September 9th, in his 71st year, after an illness extending over several months. For a period of twenty-five years Mr. Riddoch was a zealous and conscientious official of the Edinburgh Corporation. He passed into retirement on attaining the age for superannuation in 1914, but after the lapse of a few months he again resumed duty in order to release others for war service. Graduating somewhat late in life Mr. Riddoch practised for a few years in Aberdeenshire, and at the instance of the late Prof. Walley transferred his activities to official spheres. His association with the municipal abattoir made him a familiar figure to a long succession of Edinburgh students, both medical and veterinary, and many will remember with gratitude his assistance and ever ready willingness to impart information. His official work was characterised by efficiency and a conscientious thoroughness. In disposition he was quiet and most unassuming but he none the less possessed an unalterable firmness, unsuspected by those to whom he was not well known, and nothing would move him from the path of duty. His judgment in matters pertaining to Meat Inspection was highly esteemed, and his opinion was frequently sought by other municipal bodies in matters of doubt or difficulty. He had a wide knowledge of the diseases of dairy stock, and in particular he established a well-earned reputation for his ability to detect tuberculous cows. Those with whom he came in contact, both officially and in a private capacity, esteemed him for his upright character, his kindly disposition, and the fairness and justice of all his actions.

At the time of his death Mr. Riddoch was President of the Scottish Metropolitan Veterinary Medical Society. His wife predeceased him by a few months, and he leaves an only son to mourn his loss.

The late Mr. F. Brown.

Mr. Frederick Brown, one of the best known and highly-esteemed veterinary surgeons in Newcastle and throughout Northumberland and Durham, has passed away at the age of 59. For some time he had been in bad health, and about three weeks ago underwent an operation in a private nursing home. He was a son of Mr. Joseph Brown, of Newcastle, and after he had been for some time with Mr. Thompson, V.S., of Sheffield, he commenced practice in Newcastle about 30 years ago. He was for many years inspector on behalf of the Tyne and Tees Shipping Company of all the horses shipped from Newcastle Quay to Antwerp, and he retained that appointment at a later date under the direction of the Board of Agriculture. He was also an inspector for the R.S.P.C.A.

Mr Brown's only son, Lieut. Fred Anderson Brown, who was in Messrs. Barclay's Bank at Alnwick, was killed in action on October 26, 1917. The deceased gentleman is survived by a widow and a daughter.

The funeral took place at St. Andrew's Cemetery, Newcastle, on Monday 1st inst. In addition to the family mourners others present in-cluded : Mr. W. Dotchin, Mr. T. R. Jarvie, Mr. J. M.Anderson (representing the Veterinary Department of Newcastle Corporation).

Personal.

DIBBEN.—On the 16th Sept., 1919, at "Woodmancote," St. Leonard's-on-Sea, to Margery, wife of Brevet Lt.-Col. H. C. Dibben, R.A.V.C., a son.

DISEASES OF ANIMALS ACTS 1894 TO 1914, SUMMARY OF RETURNS.

Period.	Anthrax		Foot-and-Mouth Disease.		Glanders† (including Farcy)		Parasitic Mange.		Sheep Scab.	Swine Fever.	
	Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Out-breaks	Out-breaks	Slaugh-tered.
IRELAND. Week ended **Sept. 6**	...	...	...	...			Outbreaks 1		3	1	2
Corresponding Week in 1918 ...	...	...	...	...	...	...	1		1	4	5
Corresponding Week in 1917 ...	...	...	...	...	...	...	2		5	3	10
Corresponding Week in 1916 ...	...	...	...	...	...	...	4		14	6	21
Total for 36 weeks, 1919 ...	...	...	...	...	1	1	124		175	26	76
Corresponding period in 1918 ...	2	2	...	...	...	...	88		204	21	63
Corresponding period in 1917 ...	3	5	...	...	1	1	89		276	192	1073
Corresponding period in 1916 ...	3	7	...	...	...	...	52		292	230	1306

Department of Agriculture and Technical Instruction for Ireland. (Veterinary Branch), Dublin, Sept. 8, 1919

IRELAND. Week ended **Sept. 13**	...	...	...	...	...	...	Outbreaks 2		2	3	2
Corresponding Week in 1918 ...	...	...	...	...	...	...	1		4	...	...
Corresponding Week in 1917 ...	...	...	...	...	...	...	...		5	3	6
Corresponding Week in 1916 ...	...	...	...	...	...	...	2		9	4	52
Total for 37 weeks, 1919	...	...	...	...	1	1	126		177	29	78
Corresponding period in 1918 ...	2	2	...	...	...	...	89		208	12	63
Corresponding period in 1917 ...	3	5	...	...	1	1	39		281	185	1079
Corresponding period in 1916 ...	3	7	...	...	...	...	54		301	234	1358

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, Sept. 15, 1919

NOTE.—The figures for the Current Year are approximate only. * As diseased or Exposed to Infection